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Cooper et al.

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(54) **PERSONAL VIRTUAL ASSISTANT**

(75) Inventors: **Robert S. Cooper**, Columbia, SC (US); **Jeff F. McElroy**, Columbia, SC (US); **Walter Rolandi**, Columbia, SC (US); **Derek Sanders**, Columbia, SC (US); **Richard M. Ulmer**, Columbia, SC (US); **Edward Peebles**, Columbia, SC (US)

(73) Assignee: **Avaya Technology Corp.**, Basking Ridge, NJ (US)

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(58) Field of Search 379/70, 71, 72, 379/88.01, 88.04, 88.13, 88.16, 88.22–88.25, 275; 704/231, 246, 270, 270.1

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Primary Examiner—Roland Foster
(74) *Attorney, Agent, or Firm*—Birch, Stewart, Kolasch & Birch, LLP

(57) **ABSTRACT**

A computer-based virtual assistant the behavior of which can be changed by the user, comprising a voice user interface for inputting information into and receiving information from the virtual assistant by speech, a communications network, a virtual assistant application running on a remote computer, the remote computer being electronically coupled to the user interface via the communications network, wherein the behavior of the virtual assistant changes responsive to user input. A computer-based virtual assistant that also automatically adapts its behavior is disclosed, comprising a voice user interface for inputting information into and receiving information from the virtual assistant by speech, a communications network, a virtual assistant application running on a remote computer, the remote computer being electronically coupled to the user interface via the communications network, wherein the remote computer is programmed to automatically change the behavior of the virtual assistant responsive to input received by the virtual assistant. As detailed below, the virtual assistant adapts to the user in many different ways based on the input the virtual assistant receives. Such input could be user information, such as information about the user's experience, the time between user sessions, the amount of time a user pauses when recording a message, the user's emotional state, whether the user uses words associated with polite discourse, and the amount of time since a user provided input to the virtual assistant during a session.

48 Claims, 32 Drawing Sheets
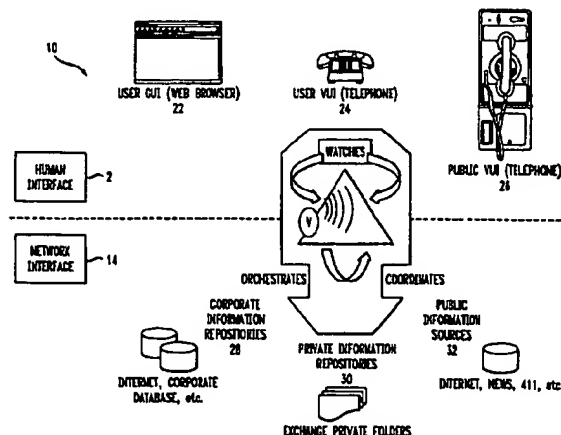
(12) **United States Patent**

Payne et al.

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(54) **CONTACT ALERTS FOR UNCONNECTED USERS**

(75) Inventors: **John M. Payne**, Laguna Beach, CA (US); **Timothy A. von Kaenel**, Coto De Caza, CA (US)

(73) Assignee: **Verus International Group, Limited**, New York, NY (US)

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This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

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(52) **U.S. Cl.** **709/203**; 709/204; 709/232
(58) **Field of Search** 709/200, 203, 709/204, 232; 395/200.3

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Primary Examiner—David Wiley
Assistant Examiner—Phuoc Nguyen
(74) *Attorney, Agent, or Firm*—Christopher J. Rourk; Akin Gump Strauss Hauer & Feld, LLP

(57) **ABSTRACT**

Users access an on-line address service to register their name (which may be a pseudonym or other fictitious or imaginary identity) and a unique contact address that may be used directly or indirectly to address a message over another communication network to an associated listening device. Once a potential user has registered his on-line identity and contact information, other users accessing the address service can then designate one of the listed names, either by selecting the name from a display list of registered names (if all registered names are displayed) or by entering the designated name onto an appropriate form, whereupon the computer hosting the address service will broadcast a message addressed to the identified person's associated listening device. Once the message is received, the listening device notifies the associated user by causing the user's computer to initiate an appropriate visual and/or audio alert display concerning the contact attempt. The user is then given an opportunity to connect to the on-line network and access a designated site to obtain further information about the attempted contact and/or to establish a direct connection with the interactive on-line activity from which the contact attempt originated, at the same time automatically launching any required browser or application software.

16 Claims, 6 Drawing Sheets